

REMARKS/ARGUMENTS

In the Office Action, claims 1-6, 8-11, 14-15, 23-25, and 28 were rejected, claims 12-13 and 26-27 were objected to (due to depending from rejected base claims). Claims 1-6, 8-15, and 23-28 are under consideration in this application. Applicant respectfully requests reconsideration for the reasons discussed below.

The claim rejections were under 35 USC 103(a) over Baer US5627849 in view of Matsumoto US6295305 and further in view of Rowe US5260953. Of these, Claims 1 and 23 are independent.

Applicant respectfully submits that the applied references do not teach, suggest, or disclose claim 1 or 23 recitations of (with emphasis added):

1. An apparatus, comprising: a tunable laser cavity, wherein said laser cavity comprises at least three mirrors, at least one filter and a plurality of crystals, wherein said at least three mirrors are substantially arranged in a folded linear cavity lambda configuration, said at least one filter comprises a birefringent filter and an etalon, at least one of said plurality of crystals comprises a Colquiriite crystal, and at least one of said plurality of crystals comprises a nonlinear crystal, wherein said at least three mirrors, said at least one filter, and said plurality of crystals are configured for providing electromagnetic radiation of an approximately single frequency; and ...

23. A tunable laser system, comprising: ... at least three mirrors, substantially arranged in a folded linear cavity lambda configuration; ..., said laser source, said one or more crystals, said at least three mirrors and said one or more filters being configured such that said laser source is capable of producing electromagnetic radiation within a particular wavelength range, at least one of said two or more crystals being configured to alter one or more properties of said electromagnetic radiation, and at least one of said one or more filters being configured to filter at least a portion of the electromagnetic radiation altered by said two or more crystals, wherein the portion filtered is adjustable to tune the frequency of the electromagnetic radiation altered by said two or more crystals.

After closely considering the Examiner's arguments and the Baer reference as a whole, Applicant submits that Baer does not teach or disclose a tunable laser cavity configured for single frequency operation (claim 1) or a tunable laser cavity with one or more filters configured to filter at least a portion of the electromagnetic radiation (claim 23).

In contrast to the Examiner's statement, Baer, in col.3, lines 9-22, does not teach a laser cavity configured for approximately single frequency operation. The referenced section in Baer

clearly recites that the system is optimized for operation with two adjacent longitudinal modes, which is clearly not an approximately single frequency operation. Applicant's claim 1 discloses a tunable laser cavity configured for approximately single frequency operation. Applicant's claim 23 recites a tunable laser system where one or more filters being configured to filter at least a portion of the electromagnetic radiation altered by said two or more crystals. This, in one embodiment, enables approximately single frequency operation.

Matsumoto was cited, with respect to claims 1 and 23, as relating to a Colquiriite crystal. Rowe was cited with respect to claims 1 and 23, as relating to frequency tunable systems. Applicant notes that both Matsumoto and Rowe relate to single longitudinal mode (single frequency) operation.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on Applicant's disclosure. To support the conclusion of obviousness, either the references must expressly or impliedly suggest the claimed combination or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

One of ordinary skill in the art would not have taken the teachings of Matsumoto or Rowe and combined them with Baer as they are optimized for different configurations. Matsumoto and Rowe configurations are optimized for single longitudinal mode operation, whereas the Baer configuration is optimized for multimode (at least two longitudinal modes) operation and optimized for providing amplitude stability. Further, with respect to claim 23, while the Applicant teaches frequency filters, Baer teaches polarization filters like Brewster plates but fails to teach wavelength/frequency filters because the system is configured for multimode (at least two longitudinal modes) operation. There is no express or implied suggestion in Baer or in Matsumoto or Rowe to modify Baer for single frequency operation. Therefore, the references fail to suggest the desirability and thus the obviousness of making the combination.

In view of the above arguments, Applicant respectfully submits that claims 1 and 23 are patentable over Baer in view of Rowe and further in view of Matsumoto. Claims 2-6, and 8-15 depend from claim 1, and claims 24-28 depend from claim 23 and are therefore believed to be

in condition for allowance at least by virtue of their dependency. Therefore, Applicant respectfully requests that claims 1-6, 8-15, and 23-28 be allowed.

In summary, Applicant submits that the remaining claims define allowable subject matter over the applied art and respectfully requests that a timely Notice of Allowance be issued in this case. Should the Examiner believe that anything further is needed to place the application in better condition for allowance, the Examiner is requested to contact Applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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